




INDIANA STATE TEACHERS' RETIREMENT FUND

**THE REPORT OF THE
ANNUAL ACTUARIAL VALUATION**

AS OF

JUNE 30, 2001

**Gabriel, Roeder, Smith and Company
Consultants and Actuaries**



CONTENTS

Section	Pages	Items
		Cover Letter
		Introduction
	1-2	Summary of Key Valuation Results
	3	Population Projections
A		Financial Principles
	1	Funding objective
	2	Actuarial valuation process
	3-4	Financing diagrams
B		Valuation Results
	1-2	Comments
	3	Computed employer contribution rates
	4-5	Development of assets and liabilities
	6-7	Summary statement of fund resources and obligations
C		Historical Comparisons
	1-2	Computed employer contribution rates
	3-4	Actuarial accrued liabilities and percent funded
	5	Unfunded actuarial accrued liability
	6-7	Retired members and beneficiaries - Allowances and liabilities
	8	Retired members and beneficiaries - Trend graphs
	9	Active members
	10	TRF Comparative Ratios
D		Population Projections
	1	Closed group actuarial projections
	2-3	Closed Plan active and retired member projection
	4-5	New Plan active and retired member projection
E		Summary of Benefit Provisions
	1-2	Benefit summary
	3	Changes in benefit purchasing power
F		Details of Valuation Data
	1-7	Retired member data
	8-9	Inactive member data
	10-11	Active member data
G		Disclosures Required by the Governmental Accounting Standards Board
	1-3	Information for GASB Statements No. 25 and No. 27
H		Actuarial Assumptions, Methods and Definitions
	1-9	Summary of assumptions used in actuarial valuation
	10-11	Definitions of technical terms



GABRIEL, ROEDER, SMITH & COMPANY
Consultants & Actuaries

1000 Town Center • Suite 1000 • Southfield, Michigan 48075 • 248-799-9000 • 800-521-0498 • fax 248-799-9020

March 25, 2002

The Board of Trustees
Indiana State Teachers' Retirement Fund
Indianapolis, Indiana

Dear Board Members:

Submitted in this report are the results of the June 30, 2001 actuarial valuation of the Indiana State Teachers' Retirement Fund.

The necessary statistical data on which the valuation was based was furnished by your Executive Director and his Staff. Their efforts and cooperation in furnishing the materials needed for this valuation are acknowledged with appreciation.

We have attempted to make the key valuation results more accessible to the users of this report by including a new section, entitled "Introduction." This section includes the following:

- A summary of the key valuation results as of June 30, 2001.
- For comparison purposes, a summary of the same key valuation results as of June 30, 2000.
- Two graphs showing projections of the current active and retired members into the future on the basis of the valuation assumptions.

On each of these exhibits, results are shown for members of the Closed Plan (i.e., those members who were hired before July 1, 1995 and have been continuously employed by the same board of education as they were on that date), for members of the New Plan (all other members), and for the entire plan in aggregate.

We hope these additions will prove to be helpful. We welcome comments from the Board on the contents of this report as well as the latest additions.

Respectfully submitted,

Brian F. Dunn, ASA, MAAA, EA

Mark K. Johnson

MKJ:lr

INTRODUCTION



SUMMARY OF KEY VALUATION RESULTS
JUNE 30, 2001

	CLOSED PLAN	NEW PLAN	ISTRF TOTAL
Fund Members			
Retired Members*			
Number	33,698	85	33,783
Annual Annuity and Pension Payments	\$ 453,306,243	\$ 1,186,156	\$ 454,492,399
Inactive Members			
Number	4,358	237	4,595
Active Members			
Number	50,802	24,846	75,648
Annual Payroll	\$ 2,564,451,154	\$754,425,873	\$ 3,318,877,027
Accrued Liabilities - Annuities and Pensions			
Retired Members*	\$ 4,121,359,222	\$ 12,080,801	\$ 4,133,440,023
Inactive Members	311,102,377	17,387,687	328,490,064
Active Members	8,263,326,092	798,569,794	9,061,895,886
Total	\$12,695,787,691	\$828,038,282	\$13,523,825,973
Fund Assets	\$ 5,363,497,813	\$447,261,751	\$ 5,810,759,564
Unfunded Accrued Liability	\$ 7,332,289,878	\$380,776,531	\$ 7,713,066,409
Funded Ratios			
Retired Member Annuity Liabilities	100.0%	100.0%	
Retired Member Pension Liabilities	59.3%	100.0%	
Retired Member Total Liabilities	65.4%	100.0%	
Active and Inactive Member Annuity Contributions	100.0%	100.0%	
Active and Inactive Member Pension Liabilities	0.0%	37.1%	
Active and Inactive Member Total Liabilities	31.1%	53.3%	
All Annuity and Pension Liabilities	42.2%	54.0%	
Computed Employer Contribution Rate			
Normal Cost	7.32%	7.46%	
Unfunded Accrued Liability	10.53%	1.86%	
Total	17.85%	9.32%	

* "Retired members" includes beneficiaries.

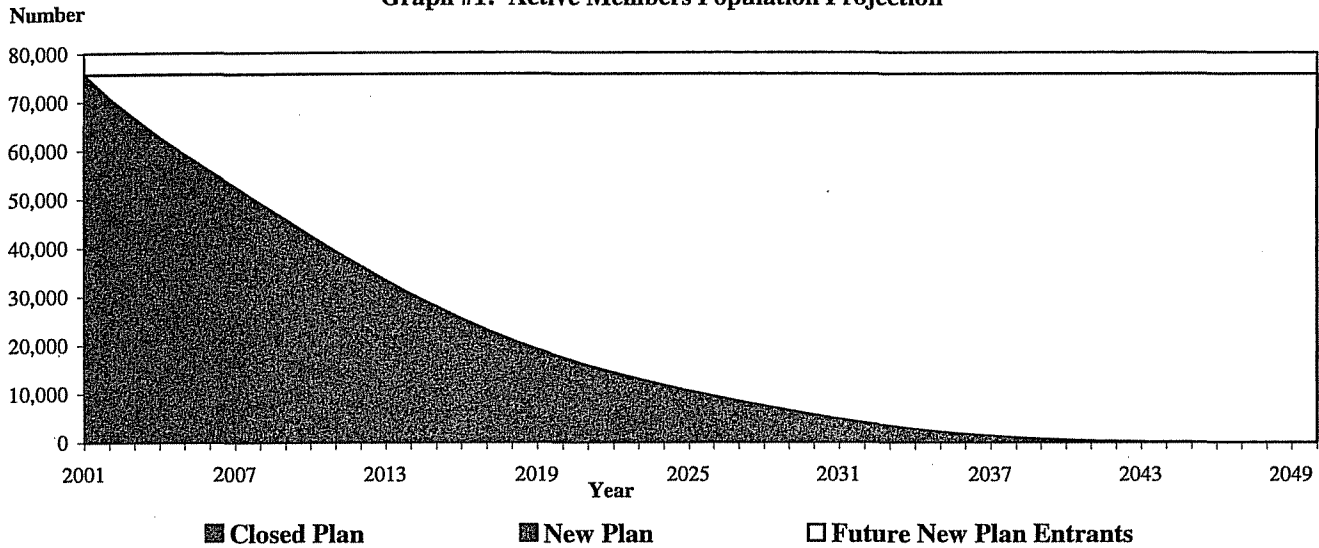
SUMMARY OF KEY VALUATION RESULTS FOR PRIOR YEAR
JUNE 30, 2000

	CLOSED PLAN	NEW PLAN	ISTRF TOTAL
Fund Members			
Retired Members*			
Number	32,818	60	32,878
Annual Annuity and Pension Payments	\$ 424,117,440	\$ 839,904	\$ 424,957,344
Inactive Members			
Number	4,065	266	4,331
Active Members			
Number	52,920	24,950	77,870
Annual Payroll	\$ 2,561,532,743	\$631,071,749	\$ 3,192,604,492
Accrued Liabilities - Annuities and Pensions			
Retired Members*	\$ 3,890,895,561	\$ 8,679,114	\$ 3,899,574,675
Inactive Members	236,453,265	11,235,656	247,688,921
Active Members	8,281,926,392	685,875,455	8,967,801,847
Total	\$12,409,275,218	\$705,790,225	\$13,115,065,443
Fund Assets	\$ 5,209,889,286	\$368,157,499	5,578,046,785
Unfunded Accrued Liability	\$ 7,199,385,932	\$337,632,726	\$ 7,537,018,658
Funded Ratios			
Retired Member Annuity Liabilities	100.0%	100.0%	
Retired Member Pension Liabilities	57.4%	100.0%	
Retired Member Total Liabilities	64.5%	100.0%	
Active and Inactive Member Annuity Contributions	100.0%	100.0%	
Active and Inactive Member Pension Liabilities	0.0%	32.7%	
Active and Inactive Member Total Liabilities	31.7%	51.6%	
All Annuity and Pension Liabilities	42.0%	52.2%	
Computed Employer Contribution Rate			
Normal Cost	7.39%	7.61%	
Unfunded Accrued Liability	10.16%	1.93%	
Total	17.55%	9.54%	

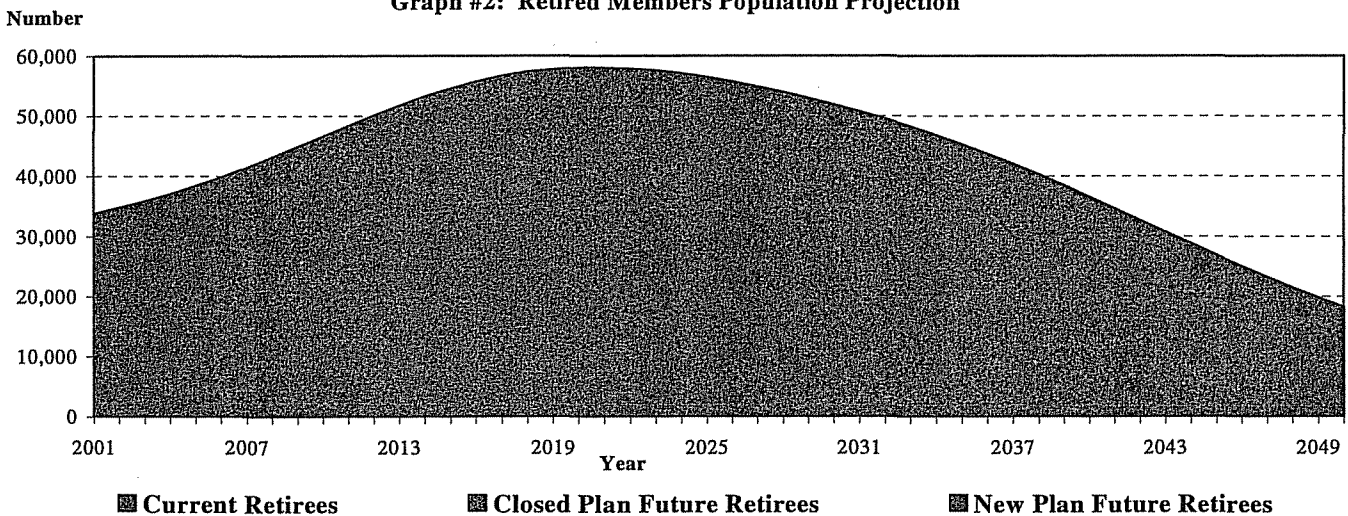
* "Retired members" includes beneficiaries.

POPULATION PROJECTIONS

Graph #1: Active Members Population Projection



Graph #2: Retired Members Population Projection



The graphs above show projections of the number of active members and retired members that are expected to be in those two categories in the future.

The projected active population levels are developed from year-to-year by the application of assumptions regarding pre-retirement withdrawal from service, retirements, deaths, disabilities and the addition of new members. The projection depicted in Graph #1 indicates that by 2011, half of the current active population will need to be replaced and that by 2040 the active membership will consist almost entirely of future hires. ***This projection assumes a constant active population level of 75,648 in the future.***

The projected retired population levels shown in Graph #2 are developed from the current retired population, the addition of new retired members from the active population, and mortality assumptions. The projection indicates that around 2019 the Closed Plan retired population will peak. Note that this graph does not include future retirements of active members that will be hired in the future. If it did, the graph would not be a "hill", but would plateau around 2025. At this point the ratio of the number of retired members to active members would remain somewhat constant at approximately 1.25 to 1. For further details on these projections see Section D of this report.

SECTION A



Financial Principles

FUNDING OBJECTIVE

A sound funding objective for any retirement plan is to establish and receive contributions, expressed as percents of active member payroll, which will remain approximately level from year-to-year and will not have to be increased for future generations of taxpayers. This objective is stated in Chapter 329 of the 1955 Acts of the State of Indiana.

CONTRIBUTION RATES

Translated into actuarial terminology, a level percent-of-payroll contribution objective means that the contribution rate must be at least:

Normal Cost (the current value of benefits likely to be paid on account of members' service being rendered in the current year)

... plus ...

Amortization of the Unfunded Actuarial Accrued Liability (the difference between the actuarial accrued liability and current plan assets).

An inevitable by-product of the level-contribution objective, if followed, is the accumulation of reserve assets and the income produced when the assets are invested. Investment income becomes in effect the third contributor for benefits payable to members, and is directly related to the contribution amounts required from members and employers.

By following the funding objective, the employer contribution rate would remain approximately a level percent of member payroll from generation to generation. Until July 1, 1995, ISTRF followed a practice of deferring contributions to future taxpayers, with the consequence that the contribution rate would relentlessly grow over the long-term as the number of retired members and the level of allowances paid increase.

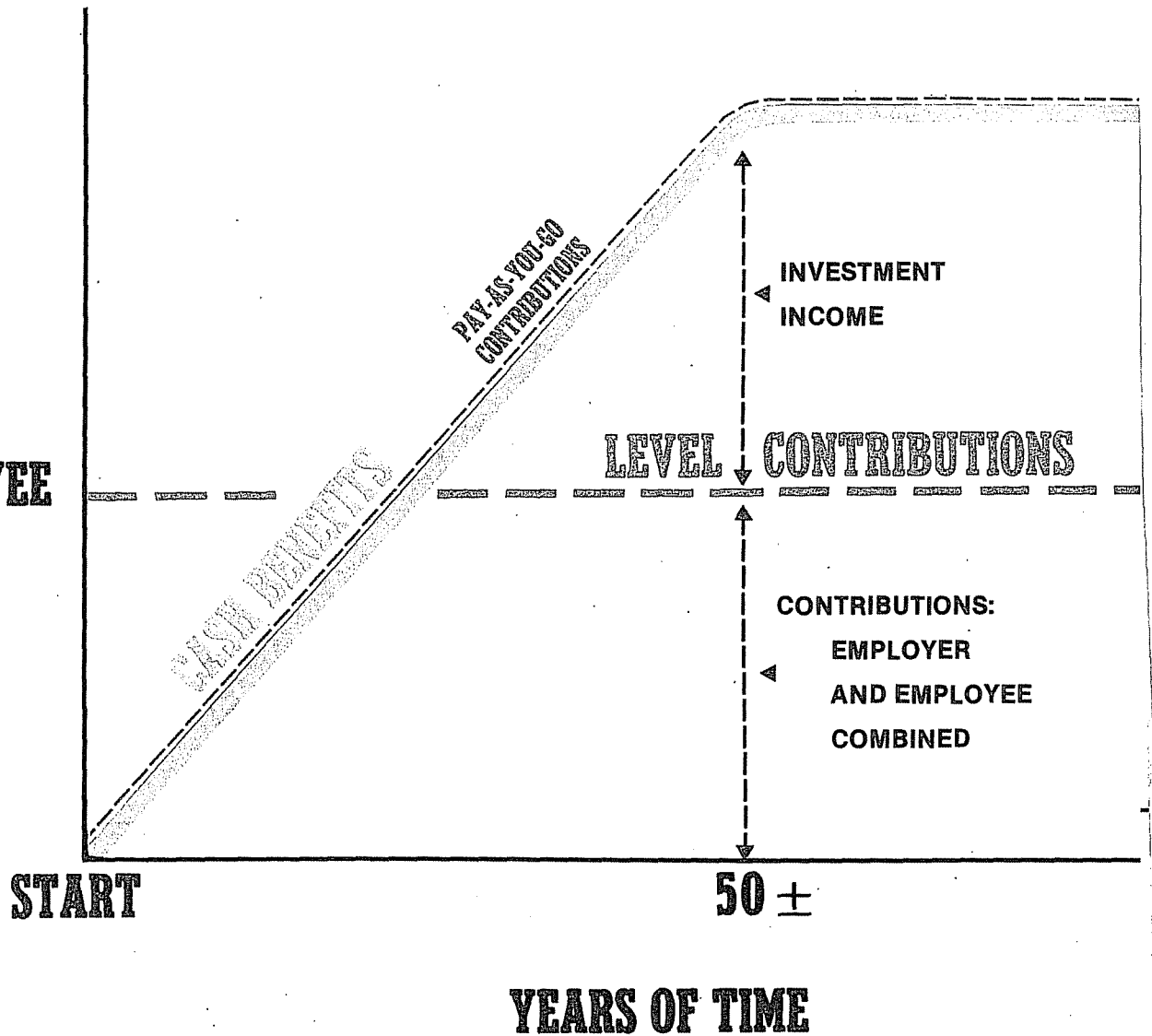
State legislation passed in 1993 provides that effective July 1, 1995, liabilities for new hires are funded on a level percent-of-payroll basis. The diagram on page A-3 illustrates this basis. The diagram on page A-4 illustrates the characteristics of the Closed Plan for teachers hired prior to July 1, 1995.

THE ACTUARIAL VALUATION PROCESS

The actuarial valuation is the mathematical process by which the level contribution rate is determined. The flow of activity constituting the valuation may be summarized as follows:

- A. **Covered Person Data**, furnished by the plan administrator
 - Retired members and beneficiaries now receiving benefits
 - Former employees with vested benefits not yet payable
 - Active employees
- B. + **Asset data** (cash and investments), furnished by the plan administrator
- C. + **Estimates of future experience (actuarial assumptions)**, which are established by the Board of Trustees after consulting with the actuary
- D. + **Funding method** for employer contributions (the long-term planned pattern for employer contributions)
- E. + **Mathematically combining the assumptions, the funding method, and the data**
- F. = Determination of:
 - Plan financial position*
 - and/or *New Employer Contribution Rate*

**% OF
ACTIVE
EMPLOYEE
PAYS**



CASH BENEFITS LINE. This relentlessly increasing line is the fundamental reality of retirement plan financing. It happens each time a new benefit is added for future retirements (and happens regardless of the design for contributing for benefits).

LEVEL CONTRIBUTION LINE. Determining the level contribution line requires detailed assumptions concerning a variety of experiences in future decades, including:

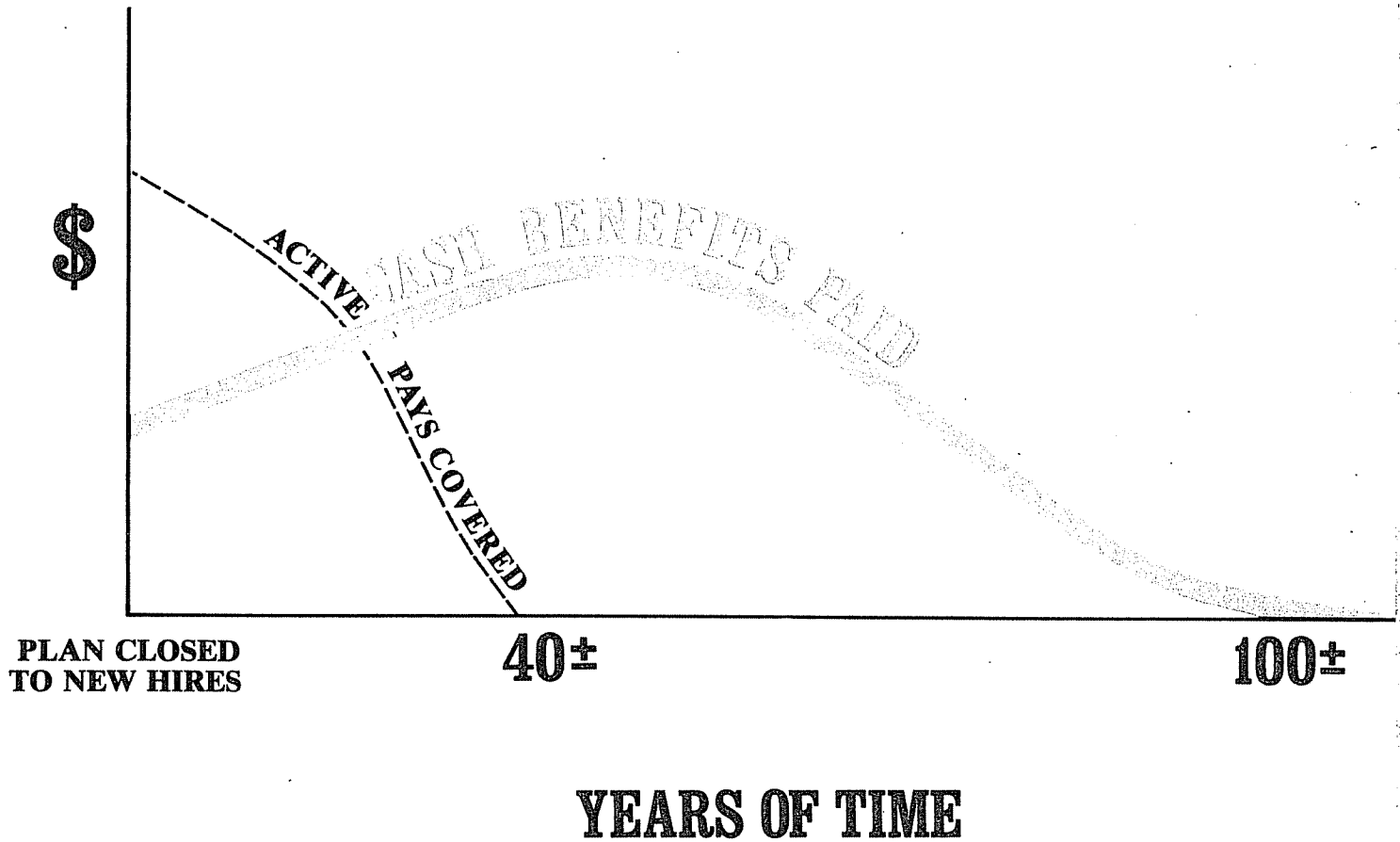
Economic Risk Areas

- Rates of investment return
- Rates of pay increase
- Changes in active member group size

Non-Economic Risk Areas

- Ages at actual retirement
- Rates of mortality
- Rates of withdrawal of active members (turnover)
- Rates of disability

A CLOSED PENSION PLAN



A plan becomes closed when no new hires are admitted to active membership. The persons covered by the plan at the time of closing continue their normal activities and continue to be covered by the plan, until the last survivor dies.

CASH BENEFITS LINE After a pension plan becomes closed, the usual pattern is for cash benefits to continue to increase for decades of time. Eventually the cash benefits will peak, and then gradually decrease over more decades of time, ultimately to zero. The last cash benefit is likely to occur a century after the time the plan is closed.

The precise amounts of cash benefits cannot be known now, and must be estimated by assumptions of future experiences in a variety of financial risk areas.

SECTION B



Valuation Results

COMMENTS

CLOSED PLAN OBSERVED EXPERIENCE

The June 30, 2001 actuarial valuation indicates the **accrued financial condition of the Closed Plan remained stable as compared to a year ago**. The portion of retired member accrued liability covered by available assets for the Closed Plan has remained at the 65% level that it was in last year's valuation (see page C-3).

The following schedule shows the impact of the State's policy over decades to contribute just enough to cover cash benefit payrolls in the Closed Plan. Additional State contributions in excess of the \$30 million from lottery revenues have been appropriated to the Pension Stabilization Fund in recent years. These additional appropriations helped to improve the retired member funded ratio in the Closed Plan.

June 30	Retired Lives	
	Number	Pension Payouts (\$ Millions)
1977	20,670	\$ 65.1
1980	22,255	91.3
1985	24,496	131.9
1990	26,664	187.8
1991	27,177	186.0
1992	27,759	197.3
1993	28,194	206.2
1994	28,677	222.8
1995	29,364	242.7
1996	30,120	265.0
1997	30,657	287.4
1998	31,307	310.4
1999	32,018	330.3
2000	32,818	363.4
2001	33,698	390.5

The annual rate of State-financed cash disbursements for retired state teachers and their surviving beneficiaries has increased at an average annual compound rate of 7.8% since 1977.

The increasing cash disbursement pattern will continue as more pre-June 1, 1995 members retire. Over the long-term the increases will moderate as a result of the funding policy for the New Plan and the Pension Stabilization Fund, together with the expected effect of expanded investment opportunities. **However, the financial stability of the Fund continues to be dependent upon taxpayers to support the increasing contribution level for pensions payable to pre-July 1, 1995 hires (Closed Plan). A projection of estimated future state financed pension payouts is shown in Section D.**

NEW PLAN OBSERVED EXPERIENCE

The accrued financial condition of the New Plan has improved. The retired member portion of the accrued liability remained at 100% funded and the portion of active member accrued liability covered by available assets increased to 37% from 33% last year (see page C-4).

The existence of unfunded actuarial accrued liability in the New Plan is primarily attributable to the transfer of members (and their accrued liabilities) from the Closed Plan. Based on our recommendations of the June 30, 1999 actuarial valuation, the Board increased the actual contribution rate for the New Plan to 9.0%. In addition, the Board adopted a "closed" 40-year amortization period for the New Plan unfunded actuarial accrued liability. As actual experience emerges in the future, additional adjustments in the contribution rate (upward or downward) may be necessary.

COMPUTED EMPLOYER CONTRIBUTION RATES
JUNE 30, 2001

Contributions for	Employer Contributions As %'s of Active Payroll	
	Closed Plan 38 Year Amortization of UAAL	New Plan 38 Year Amortization of UAAL
Normal Cost:		
Age and Service Pensions	6.95%	7.11%
Disability and Death-in-Service	0.37%	0.35%
Totals	7.32%	7.46%
Unfunded Actuarial Accrued Liability (UAAL):		
Retired Members and Beneficiaries	2.05%	0.00%
Active and Inactive Vested Members	8.48%	1.86%
Totals	10.53%	1.86%
Computed Employer Contribution Rates	17.85%	9.32%

The New Plan UAAL contribution is primarily attributable to members with prior service. Additional liabilities transferred as a result of prior service would likely require additional funding.

DEVELOPMENT OF ASSETS AND LIABILITIES

REPORTED ASSETS

Reserve Allocation	Closed Plan	New Plan	Total
Member Reserves:			
Active and Inactive	\$2,668,945,655	\$210,932,183	\$2,879,877,838
Retired	618,238,221	1,138,375	619,376,596
Total Member Reserves	3,287,183,876	212,070,558	3,499,254,434
Employer Reserves:			
Active	-	223,259,318	223,259,318
Retired			
Pension Stabilization Fund	1,833,040,979	-	1,833,040,979
Other	243,272,958	11,931,875	255,204,833
Total	2,076,313,937	11,931,875	2,088,245,812
Total Employer Reserves	2,076,313,937	235,191,193	2,311,505,130
Total Reserves	\$5,363,497,813	\$447,261,751	\$5,810,759,564

ACTUARIAL ACCRUED LIABILITY: COMPUTED AND UNFUNDED

	Closed Plan	New Plan	Total
Retired Members and Beneficiaries:			
Computed accrued liability	\$ 4,121,359,222	\$12,080,801	\$ 4,133,440,023
Allocated assets	2,694,552,158	13,070,250	2,707,622,408
Unfunded Accrued Liability	1,426,807,064	(989,449)	1,425,817,615
Active and Inactive Members:			
Computed accrued liability	8,574,428,469	815,957,481	9,390,385,950
Allocated assets	2,668,945,655	434,191,501	3,103,137,156
Unfunded Accrued Liability	5,905,482,814	381,765,980	6,287,248,794
ISTRF Total:			
Computed accrued liability	12,695,787,691	828,038,282	13,523,825,973
Allocated assets	5,363,497,813	447,261,751	5,810,759,564
Unfunded Accrued Liability	\$ 7,332,289,878	\$380,776,531	\$ 7,713,066,409

NOTES REGARDING DEVELOPMENT OF ASSETS AND LIABILITIES

REPORTED ASSETS

- *The accrued assets at market value* as of June 30, 2001 were reported to be \$5,810,759,564 and were allocated for valuation purposes as shown in this section.
- The Active and Inactive Member Reserves of \$2,879,877,838 were allocated for valuation purposes between the Closed Plan and the New Plan based on the aggregate Annuity Savings Account values in the valuation data.
- The Retired Member Reserves of \$619,376,596 were allocated for valuation purposes between the Closed Plan and the New Plan based on the calculated retired member Annuity liabilities that this reserve supports. Currently, the allocated Reserve exceeds the calculated Annuity liabilities in both plans. The excess is held as a contingency reserve against future experience.
- The Employer Reserve values were used as reported.

ACTUARIAL ACCRUED LIABILITY

- As of the valuation date, a negative Unfunded Actuarial Accrued Liability (UAAL) of \$989,449 exists for New Plan Fund retired members and beneficiaries. This is due to a temporary excess assets of over the calculated liabilities. This temporary excess does not affect the Total UAAL for the New Plan and will vary as members retire or die and transfers between active and retired employer reserves occur. In practice, one would never expect the UAAL to be exactly \$0 except where there is an assumed balancing transfer in the valuation.

CLOSED PLAN BALANCE SHEET
SUMMARY STATEMENT OF FUND RESOURCES AND OBLIGATIONS

PRESENT RESOURCES AND EXPECTED FUTURE RESOURCES

Present Resources and Expected Future Resources

	Annuities	Pensions	Total
A. Funding value of system assets			
1. Net assets from Fund financial statements	\$3,287,183,876	\$ 2,076,313,937	\$ 5,363,497,813
2. Funding value adjustment	0	0	0
3. Funding value of assets	3,287,183,876	2,076,313,937	5,363,497,813
B. Actuarial present value of expected future employer contributions			
1. For normal costs	0	1,852,751,678	1,852,751,678
2. For unfunded actuarial accrued liability	0	7,332,289,878	7,332,289,878
3. Total	0	9,185,041,556	9,185,041,556
C. Total Present and Future Resources	\$3,287,183,876	\$11,261,355,493	\$14,548,539,369

**ACTUARIAL PRESENT VALUE OF EXPECTED FUTURE
BENEFIT PAYMENTS AND RESERVES**

Actuarial Present Value of Expected Future Benefit Payments and Reserves

	Annuities	Pensions	Total
A. To retired members and beneficiaries			
1. Annual benefits	\$ 585,858,378	\$ 3,503,121,001	\$ 4,088,979,379
2. Reserve	32,379,843	0	32,379,843
3. Totals	618,238,221	3,503,121,001	4,121,359,222
B. To vested terminated members	189,928,628	121,173,749	311,102,377
C. To present active members			
1. Allocated to service rendered prior to valuation date	2,479,017,027	5,784,309,065	8,263,326,092
2. Allocated to service likely to be rendered after valuation date	0	1,852,751,678	1,852,751,678
3. Total	2,479,017,027	7,637,060,743	10,116,077,770
D. Total Actuarial Present Value of Expected Future Benefit Payments and Reserves	\$3,287,183,876	\$11,261,355,493	\$14,548,539,369

NEW PLAN BALANCE SHEET
SUMMARY STATEMENT OF FUND RESOURCES AND OBLIGATIONS

PRESENT RESOURCES AND EXPECTED FUTURE RESOURCES

	<u>Annuities</u>	<u>Pensions</u>	<u>Total</u>
A. Funding value of system assets			
1. Net assets from Fund financial statements	\$212,070,558	\$ 235,191,193	\$ 447,261,751
2. Funding value adjustment	0	0	0
3. Funding value of assets	<u>212,070,558</u>	<u>235,191,193</u>	<u>447,261,751</u>
B. Actuarial present value of expected future employer contributions			
1. For normal costs	0	889,942,536	889,942,536
2. For unfunded actuarial accrued liability	0	380,776,531	380,776,531
3. Total	<u>0</u>	<u>1,270,719,067</u>	<u>1,270,719,067</u>
C. Total Present and Future Resources	\$212,070,558	\$1,505,910,260	\$1,717,980,818

**ACTUARIAL PRESENT VALUE OF EXPECTED FUTURE
BENEFIT PAYMENTS AND RESERVES**

	<u>Annuities</u>	<u>Pensions</u>	<u>Total</u>
A. To retired members and beneficiaries			
1. Annual benefits	\$ 1,078,753	\$ 10,942,426	\$ 12,021,179
2. Reserve	59,622	0	59,622
3. Totals	<u>1,138,375</u>	<u>10,942,426</u>	<u>12,080,801</u>
B. To vested terminated members	11,876,771	5,510,916	17,387,687
C. To present active members			
1. Allocated to service rendered prior to valuation date	199,055,412	599,514,382	798,569,794
2. Allocated to service likely to be rendered after valuation date	0	889,942,536	889,942,536
3. Total	<u>199,055,412</u>	<u>1,489,456,918</u>	<u>1,688,512,330</u>
D. Total Actuarial Present Value of Expected Future Benefit Payments	\$212,070,558	\$1,505,910,260	\$1,717,980,818

SECTION C



Historical Comparisons of Valuation Results and Data

**COMPUTED EMPLOYER CONTRIBUTION RATES
EXPRESSED AS PERCENTS OF PAYROLL
HISTORICAL COMPARISON**

NEW PLAN

Valuation Date June 30	Normal Cost	Unfunded Actuarial Accrued Liability (UAAL)			Total Employer Rate
		Active and Inactive	Retired	Totals	
1996(b)	7.66%	1.36%	0.00%	1.36%	9.02%
1997#(b)	7.61	1.51	0.00	1.51	9.12
1998(b)	7.61	1.46	0.00	1.46	9.07
1999(b)	7.58	1.70	0.00	1.70	9.28
2000	7.61	1.93	0.00	1.93	9.54
2001	7.46	1.86	0.00	1.86	9.32

(b) Based on closed 40 year amortization of UAAL beginning with the 1999 valuation. Open 40 year amortization of UAAL was used for the 1996-1998 valuations.

After amendments and/or revised actuarial assumptions.

**HISTORICAL COMPARISON
CLOSED PLAN
ACTUARIAL ACCRUED LIABILITY - PERCENT FUNDED**

If the contributions to ISTRF are level in concept and soundly executed, the Fund will *pay all promised benefits when due -- the ultimate indicator of financial soundness.*

One short-term means of checking a fund's progress under its funding program is shown below. In this indicator, the fund's present assets (cash and investments) are compared with:

- 1) active member contributions on deposit;
- 2) liability for future benefits to present retired lives; and
- 3) liability for service already rendered by active members.

In a fund that has been following the discipline of level percent-of-payroll financing, the liability for active member contributions on deposit (Liability 1) and the liability for future benefits to present retired lives (Liability 2) will be fully covered by present assets (except in rare circumstances). In addition, the liability for service already rendered by active members (Liability 3) will be partially covered by the remainder of present assets. The State's past practice of contributing on a "pay-as-you-go" basis has resulted in Liability 2 being less than 100% funded in the Closed Plan.

June 30	<u>Computed Actuarial Accrued Liability</u>			Valuation Assets	Portion of Accrued Liability Covered by Assets		
	(1) Member Contr.	(2) Retired Lives	(3) Present Members (Employer Financed Portion) (\$ in Millions)		(1)	(2)	(3)
1975#(a)	\$ 216	\$ 451	\$ 903	\$ 312	100%	21%	0%
1977#	265	634	1,246	375	100	17	-
1979#(a)	324	777	1,481	466	100	18	-
1980	373	838	1,632	539	100	18	-
1981	423	885	1,649	601	100	20	-
1983(a)	544	1,043	1,751	765	100	21	-
1985	713	1,198	2,112	1,073	100	30	-
1987	932	1,406	2,499	1,401	100	33	-
1989#	1,132	1,624	3,449	1,707	100	35	-
1991	1,373	1,853	3,956	2,161	100	43	-
1992(a)	1,521	2,059	4,369	2,376	100	42	-
1993	1,665	2,290	4,553	2,592	100	41	-
1994	1,812	2,483	4,792	2,808	100	40	-
1995	1,930	2,716	5,029	2,984	100	39	-
1996	2,070	2,968	5,245	3,242	100	39	-
1997(a)	2,188	3,234	5,447	3,678	100	46	-
1998	2,374	3,479	5,629	4,130	100	50	-
1999	2,500	3,659	6,014	4,731	100	61	-
2000	2,699	3,890	5,819	5,210	100	65	-
2001	2,669	4,121	5,905	5,363	100	65	-

Legislated plan amendments.

(a) Actuarial assumptions revised.

**HISTORICAL COMPARISON
NEW PLAN
ACTUARIAL ACCRUED LIABILITY - PERCENT FUNDED**

June 30	<u>Computed Actuarial Accrued Liability</u>			Valuation Assets	Portion of Accrued Liability Covered by Assets		
	(1) Member Contr.	(2) Retired Lives	(3) Present Members (Employer Financed Portion) (\$ in Millions)		(1)	(2)	(3)
1996	\$ 14	\$ 0.3	\$ 33	\$ 21	100%	100%	21%
1997(a)	46	0.4	130	72	100	100	20
1998	74	2.6	222	136	100	100	27
1999	126	3.9	369	240	100	100	30
2000	195	9.8	502	368	100	100	33
2001	211	12.1	605	447	100	100	37

(a) Actuarial assumptions revised.

The excess of accrued liability over valuation assets reflects the inclusion of new hires with prior service credit.

CLOSED PLAN

UNFUNDED ACTUARIAL ACCRUED LIABILITY

June 30	Computed Actuarial Accrued Liability*	Valuation Assets	Unfunded Actuarial Accrued Liability (UAAL)
1975#(a)	\$ 1,570	\$ 312	\$ 1,258
1977#	2,145	375	1,770
1979#(a)	2,582	466	2,116
1980	2,843	539	2,304
1981	2,957	601	2,356
1983(a)	3,338	765	2,573
1985	4,023	1,073	2,950
1987	4,837	1,401	3,436
1989#	6,205	1,707	4,498
1991	7,182	2,161	5,021
1992(a)	7,949	2,376	5,573
1993	8,508	2,592	5,916
1994	9,087	2,809	6,279
1995	9,675	2,984	6,691
1996	10,283	3,242	7,041
1997(a)	10,868	3,678	7,190
1998	11,481	4,130	7,351
1999	12,173	4,731	7,442
2000	12,409	5,210	7,199
2001	12,696	5,363	7,332

NEW PLAN

UNFUNDED ACTUARIAL ACCRUED LIABILITY

June 30	Computed Actuarial Accrued Liability*	Valuation Assets	Unfunded Actuarial Accrued Liability (UAAL)
1996	\$ 48	\$ 21	\$ 27
1997(a)	176	72	104
1998	298	136	162
1999	498	240	258
2000	706	368	338
2001	828	447	381

Legislated plan amendments.

(a) Actuarial assumptions revised.

* Including annuity reserve.

The presence of unfunded actuarial accrued liability in the New Plan reflects the inclusion of transfers from the Closed Plan with prior service credit.

RETIRED MEMBERS AND BENEFICIARIES MONTHLY ALLOWANCES AND RELATED LIABILITY HISTORICAL COMPARISON

Closed Plan

Monthly Allowances Being Paid				Computed Liability		Reserves Available for	Ratio of Reserves to
Number	Annuities	Pensions	Avg. Total Allowances	Annuities #	Pensions	Retired Lives	Liability
19,961	\$ 713,332	\$ 4,949,716	\$ 284	\$ 90,519,552	\$ 430,998,792	\$ 103,417,581	19.8 %
20,670	767,214	5,419,783	299	81,192,972	553,129,812	109,541,561	17.3
21,312	821,780	5,981,203	319	87,002,688	608,034,852	122,903,169	17.7
21,808	875,217	6,478,769	337	92,554,872	684,265,584	138,791,199	17.9
22,255	933,253	7,609,102	384	98,744,304	739,477,692	152,227,411	18.2
22,738	1,003,764	7,891,508	391	106,525,692	778,993,680	178,126,912	20.1
23,261	1,086,088	8,656,992	419	109,389,360	853,368,564	210,986,498	21.9
23,631	1,167,337	9,576,598	455	121,488,456	921,241,128	220,447,081	21.1
24,042	1,270,621	10,152,389	475	132,872,688	969,470,076	267,364,320	24.3
24,496	1,412,942	10,989,033	506	149,309,064	1,049,064,600	360,036,868	30.0
24,954	1,580,585	11,848,715	538	168,855,576	1,127,083,092	423,496,495	32.7
25,492	1,771,901	12,705,712	568	191,274,096	1,214,737,224	468,533,788	33.3
25,849	1,954,326	13,521,271	599	212,323,404	1,295,323,680	525,277,956	34.8
26,173	2,158,461	14,387,419	632	235,879,716	1,387,778,748	575,176,619	35.4
26,664	2,448,268	15,649,770	679	270,612,204	1,521,301,656	664,922,515	37.1
27,177	2,729,359	15,498,308	671	300,739,500	1,552,581,216	787,869,959	42.5
27,759	3,006,489	16,441,198	701	341,941,104	1,717,495,500	855,640,166	41.5
28,194	3,439,687	17,180,701	731	469,421,977	1,820,905,044	927,804,051	41.0
28,677	3,695,040	18,563,890	776	499,429,500	1,983,402,204	996,033,842	40.1
29,364	3,955,212	20,228,163	824	534,973,912	2,181,300,588	1,054,045,397	38.8
30,120	4,212,455	22,081,911	873	564,310,332	2,404,081,944	1,172,253,144	39.5
30,657	4,432,010	23,949,443	926	590,012,474	2,643,637,512	1,490,448,302	46.1
31,307	4,650,748	25,867,893	975	607,908,268	2,870,838,240	1,756,324,911	50.5
32,018	4,843,545	27,524,587	1,011	625,058,387	3,034,060,036	2,231,076,672	61.0
32,818	5,057,926	30,285,194	1,077	648,366,105	3,242,529,456	2,510,470,810	64.5
33,698	5,231,219	32,544,302	1,121	618,238,221	3,503,121,001	2,694,552,158	65.4

* Revised assumptions.

Includes annuity reserve.

@ The data did not include the COLA effective 7/1/99. An adjustment was made to the pension liability and projected pension payouts for valuation purposes.

RETIRED MEMBERS AND BENEFICIARIES MONTHLY ALLOWANCES AND RELATED LIABILITY HISTORICAL COMPARISON

New Plan

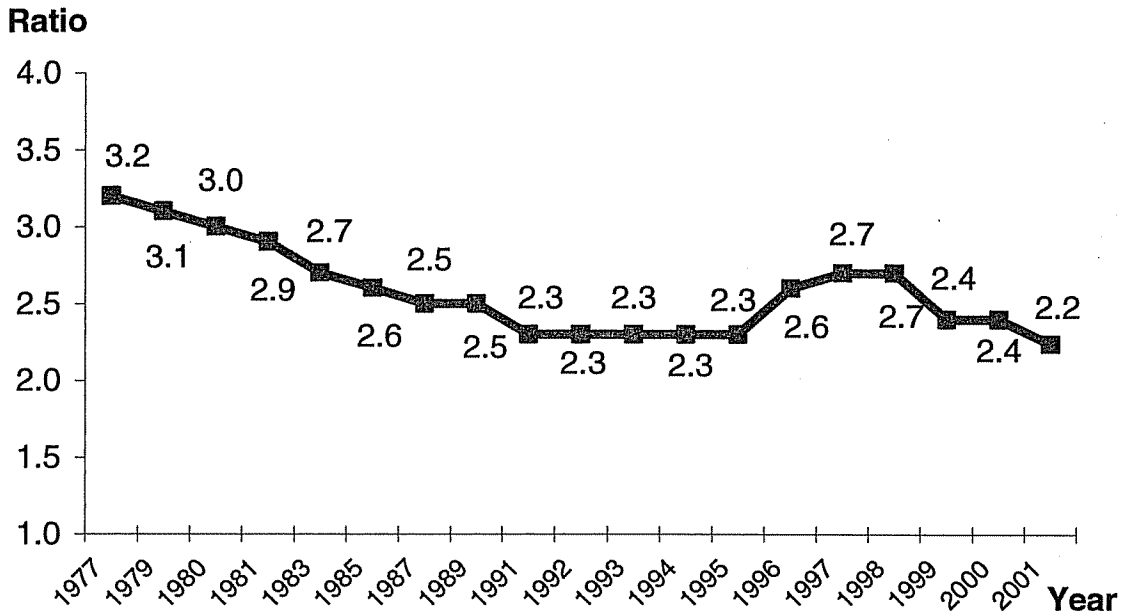
Valuation June 30	Monthly Allowances Being Paid				Computed Liability		Reserves Available for Retired Lives	Ratio of Reserves to Liability
	Number	Annuities	Pensions	Avg. Total Allowances	Annuities #	Pensions		
1996	1	\$ 334	\$ 1,727	\$2,061	\$ 55,108	\$ 248,376	\$ 303,484	100.0%
1997*	1	334	1,762	2,096	133,846	252,564	386,410	100.0
1998	18	2,257	16,494	1,042	431,846	2,219,496	2,703,524	100.0
1999	30	3,311	28,760	1,069	498,774	3,404,460	3,903,234	100.0
2000	60	7,460	62,532	1,167	1,126,062	7,553,052	8,679,114	100.0
2001	85	8,169	90,677	1,163	1,138,375	10,942,426	13,070,250	108.2

* Revised assumptions.

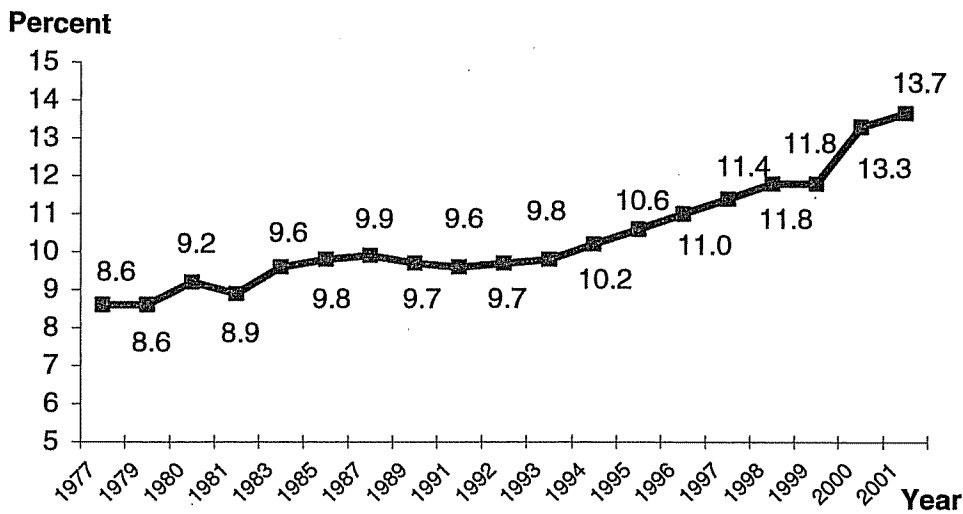
Includes annuity reserve.

TRF COMPARATIVE STATISTICAL RATIOS

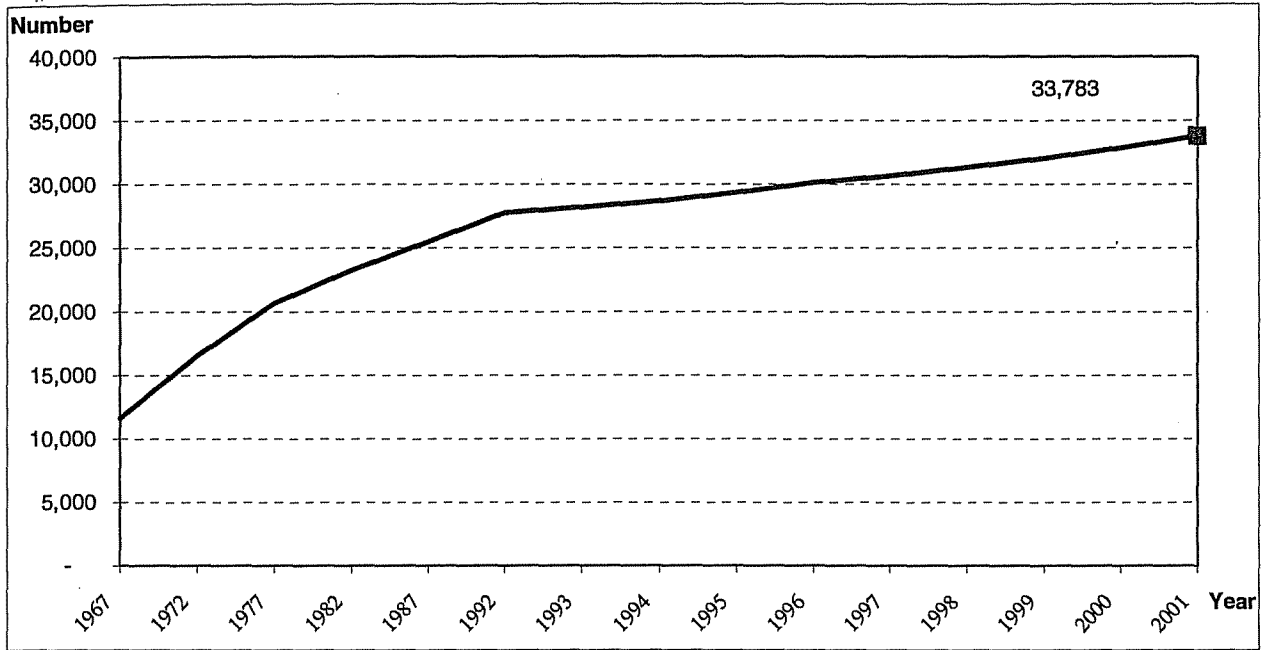
Active Members Per Retired Life



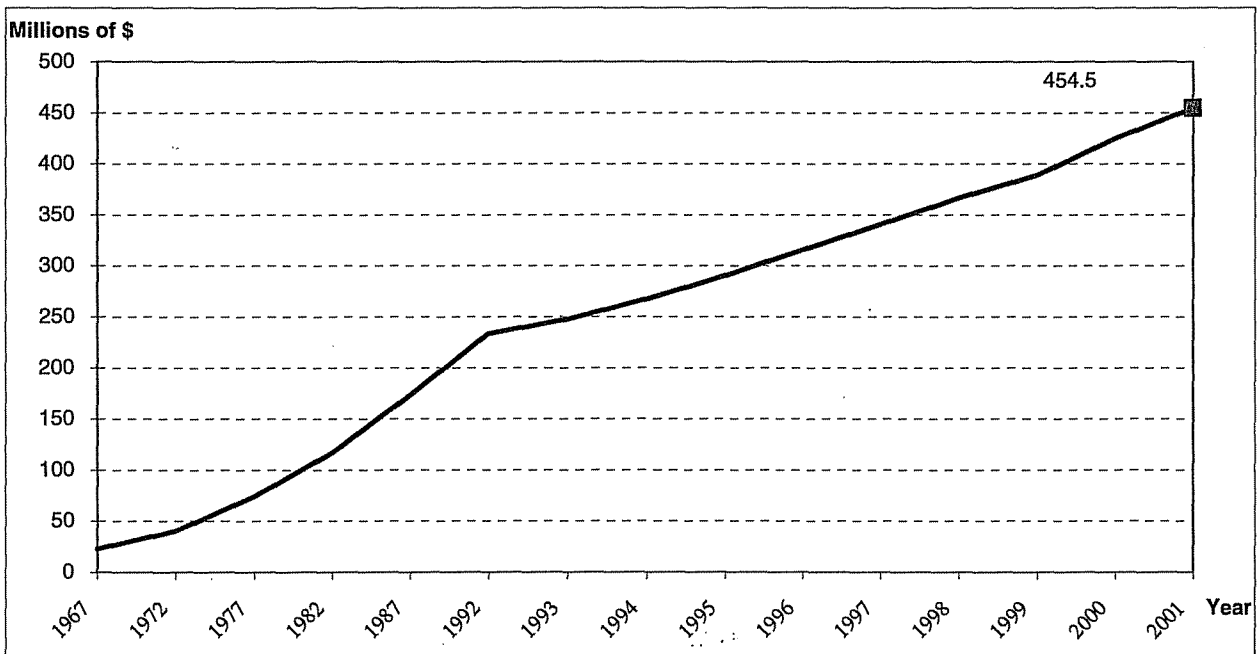
Annual Retirement Allowances as a Percent of Valuation Payroll



RETIRED MEMBERS AND BENEFICIARIES RECEIVING BENEFITS



TOTAL RETIREMENT ALLOWANCES BEING PAID ANNUALLY



ACTIVE MEMBER DATA HISTORICAL COMPARISON

Valuation Date June 30	No. of Active Members	Valuation Payroll (+000)	Closed Plan			
			Age	Service	Salary	Annual Increase
1975	63,932	\$ 749,200	38.7 yrs.	10.9 yrs.	\$ 11,719	
1977	65,573	891,780	39.0	11.2	13,600	7.7%
1979	66,523	1,024,888	39.4	11.5	15,406	6.4
1980	66,575	1,107,699	39.7	11.9	16,638	8.0
1981	65,283	1,194,856	40.0	12.2	18,303	10.0
1983	64,280	1,350,061	41.1	13.3	21,003	7.1
1985	62,932	1,519,887	41.5	14.2	24,151	7.2
1987	64,157	1,751,709	42.0	14.5	27,303	6.3
1989	65,986	2,044,797	42.6	14.9	30,988	6.5
1991	63,373	2,278,715	43.0	15.4	35,957	7.7
1992	63,980	2,416,263	43.8	16.0	37,766	5.0
1993	64,594	2,536,165	44.0	16.1	39,263	4.0
1994	65,209	2,614,915	44.1	16.2	40,101	2.1
1995	66,542	2,728,811	44.2	16.2	41,009	2.3
1996	70,183	2,805,823	44.2	15.7	39,979	(2.5)
1997	63,520	2,739,436	45.4	16.9	43,127	7.9
1998	59,030	2,699,183	46.4	18.0	45,726	6.0
1999	56,560	2,755,489	47.4	19.3	48,718	6.5
2000	52,920	2,561,533	48.2	20.1	48,404	(0.6)
2001	50,802	2,564,451	48.7	20.7	50,479	4.3

New Plan

Valuation Date June 30	No. of Active Members	Valuation Payroll (+000)	New Plan			
			Age	Service	Salary	Annual Increase
1996	8,683	\$ 72,506	32.2 yrs.	1.3 yrs.	\$ 8,350	
1997	20,686	245,168	33.0	1.8	11,852	41.9%
1998	25,634	395,758	33.6	2.2	15,439	30.3
1999	21,185*	538,837	35.3	4.0	25,435	64.7
2000	24,950	631,072	36.4	4.7	25,293	(0.6)
2001	24,846	754,426	36.3	5.5	30,364	20.0

* Excludes non-degreed substitute teachers (who had previously been included in the data but who do not participate in the Fund).

SECTION D



Population Projections

CLOSED GROUP ACTUARIAL PROJECTIONS

The schedules on the following pages were produced by means of an actuarial projection.

Whereas actuarial valuations provide a snapshot of the Retirement Fund as of a given date, actuarial projections provide a moving picture of Retirement Fund activities. The projected active and retired groups are developed from year-to-year by applying assumptions regarding pre-retirement withdrawal from service, retirements, deaths, and disabilities. Projected information regarding plan activity produces an expected future benefit payout stream.

Projection results are useful in demonstrating changing relationships among key elements affecting system financial activity. For example: how benefits payable and assets will grow in future decades. **Projections are not predictions of specific future events and do not provide numeric precision in absolute terms.** For instance, benefits projected to occur 10 years in the future will not be exact (except by coincidence), but understanding the changed relationships over a period of years can be very useful.

A graphical representation of the population counts that are contained in the following pages is shown in the Introduction, on page 3, at the beginning of this report.

CLOSED PLAN
ACTIVE AND RETIRED MEMBER CLOSED GROUP PROJECTION
BASED ON JUNE 30, 2001 VALUATION DATA AND ASSUMPTIONS
(\$ IN MILLIONS)

Year	Active Members		Retired Members	
	Number	Payroll	Number	State Financed Payroll
2001	50,802	\$ 2,564.5	33,698	\$ 390.5
2002	48,170	2,603.9	34,626	415.3
2003	45,650	2,639.1	35,614	434.5
2004	43,110	2,661.9	36,717	459.8
2005	40,537	2,670.5	37,928	489.8
2006	37,927	2,662.6	39,246	525.8
2007	35,275	2,636.3	40,679	566.9
2008	32,600	2,591.6	42,182	613.8
2009	29,922	2,528.3	43,707	666.1
2010	27,281	2,448.3	45,195	722.0
2011	24,731	2,355.0	46,604	780.4
2012	22,286	2,249.1	47,956	841.2
2013	19,969	2,134.0	49,209	902.8
2014	17,818	2,014.8	50,276	963.0
2015	15,835	1,893.4	51,120	1,020.7
2016	14,011	1,770.3	51,760	1,075.9
2017	12,336	1,645.8	52,242	1,128.4
2018	10,817	1,523.4	52,487	1,176.7
2019	9,458	1,405.5	52,488	1,219.7
2020	8,242	1,292.5	52,311	1,257.8
2021	7,160	1,184.4	51,918	1,290.5
2022	6,193	1,080.2	51,385	1,318.3
2023	5,334	981.3	50,680	1,340.9
2024	4,567	886.0	49,819	1,358.4
2025	3,875	793.2	48,827	1,371.3
2026	3,255	702.8	47,701	1,379.8
2027	2,701	614.6	46,480	1,383.8
2028	2,219	532.2	45,133	1,382.6
2029	1,803	455.7	43,687	1,376.0
2030	1,445	384.7	42,165	1,364.7

Note: Projections are intended to demonstrate the pattern of future activities and should not be viewed as a prediction of specific dollar amounts in any year.

CLOSED PLAN
ACTIVE AND RETIRED MEMBER CLOSED GROUP PROJECTION
BASED ON JUNE 30, 2001 VALUATION DATA AND ASSUMPTIONS
(\$ IN MILLIONS)

- CONTINUED -

Year	Active Members		Retired Members	
	Number	Payroll	Number	State Financed
				Payroll
2031	1,142	\$ 320.2	40,549	\$ 1,348.3
2032	886	261.1	38,850	1,326.8
2033	677	209.6	37,086	1,299.9
2034	506	164.7	35,266	1,267.8
2035	370	126.1	33,425	1,231.0
2036	266	94.7	31,565	1,189.8
2037	187	69.2	29,681	1,144.7
2038	129	49.4	27,787	1,096.4
2039	86	34.0	25,903	1,045.5
2040	54	22.1	24,052	992.8
2041	32	13.3	22,249	938.8
2042	18	7.5	20,501	883.9
2043	10	4.1	18,822	828.6
2044	6	2.2	17,215	773.7
2045	3	1.2	15,686	719.6
2046	1	0.5	14,242	666.8
2047	1	0.3	12,884	615.5
2048	0	0.1	11,612	566.2
2049	0	0.0	10,428	518.7
2050	-	-	9,330	473.4

Note: Projections are intended to demonstrate the pattern of future activities and should not be viewed as a prediction of specific dollar amounts in any year.

NEW PLAN
ACTIVE AND RETIRED MEMBER CLOSED GROUP PROJECTION
BASED ON JUNE 30, 2001 VALUATION DATA AND ASSUMPTIONS
(\$ IN MILLIONS)

Year	Active Members		Retired Members	
	Number	Payroll	Number	State Financed
				Payroll
2001	24,846	\$ 754.4	85	\$ 1.1
2002	22,568	759.0	129	1.8
2003	20,929	772.6	200	2.6
2004	19,671	793.6	291	3.9
2005	18,678	820.5	407	5.4
2006	17,886	851.6	543	7.4
2007	17,185	884.1	708	9.9
2008	16,519	916.9	904	13.0
2009	15,879	949.5	1,132	16.7
2010	15,245	980.8	1,404	21.3
2011	14,607	1,010.6	1,730	26.7
2012	13,972	1,038.1	2,095	33.0
2013	13,338	1,062.5	2,500	40.5
2014	12,706	1,083.6	2,938	49.2
2015	12,071	1,101.1	3,404	58.7
2016	11,445	1,115.8	3,883	69.1
2017	10,834	1,127.5	4,362	80.3
2018	10,248	1,136.6	4,822	92.0
2019	9,692	1,143.9	5,256	104.3
2020	9,152	1,148.2	5,677	117.5
2021	8,639	1,151.2	6,079	131.3
2022	8,144	1,152.2	6,467	146.0
2023	7,664	1,151.0	6,853	161.8
2024	7,198	1,146.7	7,232	178.9
2025	6,736	1,137.8	7,603	197.7
2026	6,264	1,120.8	7,986	219.0
2027	5,775	1,093.0	8,389	243.4
2028	5,267	1,053.4	8,811	271.3
2029	4,743	1,001.0	9,247	302.7
2030	4,208	936.4	9,705	337.2

Note: Projections are intended to demonstrate the pattern of future activities and should not be viewed as a prediction of specific dollar amounts in any year.

NEW PLAN
ACTIVE AND RETIRED MEMBER CLOSED GROUP PROJECTION
BASED ON JUNE 30, 2001 VALUATION DATA AND ASSUMPTIONS
(\$ IN MILLIONS)

- CONTINUED -

Year	Active Members		Retired Members	
	Number	Payroll	Number	State Financed
				Payroll
2031	3,671	\$ 861.3	10,174	\$ 374.3
2032	3,146	778.4	10,644	413.2
2033	2,647	691.4	11,091	452.6
2034	2,191	604.2	11,495	490.9
2035	1,784	519.2	11,855	527.3
2036	1,426	437.6	12,150	560.8
2037	1,117	360.3	12,376	590.3
2038	856	290.1	12,505	614.7
2039	640	227.4	12,533	633.6
2040	465	172.8	12,481	646.8
2041	328	127.4	12,355	654.2
2042	223	90.0	12,171	656.5
2043	147	61.2	11,917	653.9
2044	93	39.7	11,575	646.8
2045	55	23.8	11,169	635.9
2046	30	12.7	10,740	621.5
2047	13	5.2	10,295	604.4
2048	4	1.2	9,836	584.8
2049	0	0.0	9,368	563.2
2050	0	0.0	8,893	540.2

Note: Projections are intended to demonstrate the pattern of future activities and should not be viewed as a prediction of specific dollar amounts in any year.

SECTION E



Summary of Benefit Provisions

SUMMARY OF BENEFIT PROVISIONS
(SUMMARY UPDATED TO JUNE 30, 2001)

REGULAR RETIREMENT (NO REDUCTION FACTOR FOR AGE)

Eligibility - Age 65 with 10 years service or age 60 with 15 or more years of service or if age is at least 55 and the sum of age plus credited service is 85 or more.

Mandatory Retirement Age - None.

Annual Amount - State pension equal to total service times 1.1% of Final Average Salary.

Type of Final Average Salary - Average of highest 5 years.

EARLY RETIREMENT (AGE REDUCTION FACTOR USED)

Eligibility - Age 50 with 15 or more years service.

Annual Amount - State pension is computed as regular retirement benefit but reduced 1/10 of 1% for each month age at retirement is between 60 and 65 and 5/12 of 1% for each month under age 60.

DEFERRED RETIREMENT (VESTED BENEFIT)

Eligibility - 10 years of service. Benefit commences at regular or early retirement eligibility.

Annual Amount - Computed as a regular retirement benefit with state pension based on service and final average salary at termination.

DISABILITY RETIREMENT

Eligibility - 5 years of service.

Annual Amount - \$125 per month plus \$5 for each year of service credit over 5 years.

DEATH BEFORE RETIREMENT

Eligibility - 15 years of service. Spouse to whom member had been married for 2 or more years is automatically eligible, or a dependent may be designated as beneficiary.

Annual Amount - Computed as regular retirement benefit but reduced in accordance with a 100% joint and survivor election.

BENEFIT INCREASES AFTER RETIREMENT

No automatic increases after retirement are provided. Periodically, unscheduled increases have been made.

MEMBER CONTRIBUTIONS

All Fund members are required by state law to contribute 3% of salary contributions to their Annuity Savings Account. These 3% contributions are "picked-up" by the employer and contributed on a pre-tax basis on behalf of the employee. Extra voluntary contributions by the member are also possible but on a post-tax basis. At retirement, there are six alternatives for receiving the proceeds of this account including lump sums, full and partial rollovers, full and partial annuitization of the balance and deferred distribution.

FORMS OF BENEFIT PAYMENT (STATE PENSION)

The normal form of benefit payment (*Option A-1*) is a single life annuity with a 5 year certain period. There are 5 optional forms of payment available as listed below. Additionally, members retiring between ages 50 and 62 may integrate their pension benefit with their Social Security benefit by choosing Social Security Integration (*Option A-4*) in conjunction with the normal form or any other optional form selected. Optional forms of payment are calculated on an actuarial equivalent basis.

Option A-2: Straight Life benefit with no certain period.

Option A-3: Modified Cash Refund Annuity (operates in conjunction with the Annuity Savings Account).

Option B-1: 100% Survivorship.

Option B-2: 66 2/3% Survivorship.

Option B-3: 50% Survivorship

State law provides for actuarially adjusted and recalculated benefits based on a new optional form election in the event of the death the members spouse after retirement. (IC 5-10.2-4-7)

BENEFIT CHANGES DURING RECENT YEARS OF RETIREMENT AND RELATED CHANGES IN PURCHASING POWER

Retiring During Year Ending	March 31 CPI	Value of \$100 in 2001 Before Accumulated Increases	Accumulated Increases	Value of \$100 in 2001 After Accumulated Increases
6/30/1955	26.9	\$ 15.59	261.64%	\$ 56.36
6/30/1959	29.1	16.86	234.30	56.36
6/30/1960	29.5	17.09	229.76	56.36
6/30/1961	30.0	17.38	224.27	56.36
6/30/1962	30.3	17.56	221.06	56.36
6/30/1963	30.7	17.79	216.87	56.36
6/30/1964	31.1	18.02	212.80	56.36
6/30/1965	31.5	18.25	208.83	56.36
6/30/1966	32.3	18.71	201.18	56.36
6/30/1967	33.2	19.24	193.01	56.36
6/30/1968	34.5	19.99	181.97	56.36
6/30/1969	36.3	21.03	167.99	56.36
6/30/1970	38.4	22.25	153.33	56.36
6/30/1971	40.2	23.29	141.99	56.36
6/30/1972	41.6	24.10	133.85	56.36
6/30/1973	43.6	25.26	123.12	56.36
6/30/1974	48.0	27.81	105.16	57.06
6/30/1975	53.0	30.71	103.21	62.40
6/30/1976	56.2	32.56	89.81	61.80
6/30/1977	59.8	34.65	84.35	63.87
6/30/1978	63.7	36.91	78.98	66.06
6/30/1979	70.3	40.73	73.77	70.78
6/30/1980	80.5	46.64	65.48	77.18
6/30/1981	89.0	51.56	48.70	76.67
6/30/1982	94.8	54.92	38.53	76.09
6/30/1983	98.4	57.01	34.50	76.68
6/30/1984	101.8	58.98	30.62	77.04
6/30/1985	105.9	61.36	25.58	77.05
6/30/1986	107.9	62.51	21.90	76.21
6/30/1987	111.0	64.31	20.70	77.62
6/30/1988	115.1	66.69	16.03	77.38
6/30/1989	120.8	69.99	13.76	79.62
6/30/1990	127.1	73.64	13.76	83.77
6/30/1991	133.0	77.06	11.81	86.16
6/30/1992	137.0	79.37	11.81	88.75
6/30/1993	141.1	81.75	10.71	90.50
6/30/1994	144.4	83.66	7.46	89.90
6/30/1995	148.7	86.15	7.46	92.58
6/30/1996	152.9	88.59	4.05	92.17
6/30/1997	157.0	90.96	1.00	91.87
6/30/1998	158.7	91.95	1.00	92.87
6/30/1999	161.4	93.51	1.00	94.45
6/30/2000	167.9	97.28	0.00	97.28
6/30/2001	172.6	100.00	0.00	100.00

SECTION F



Details of Valuation Data

CLOSED PLAN
RETIRED MEMBERS AND BENEFICIARIES JUNE 30, 2001
MONTHLY BENEFIT AMOUNTS BY TYPE OF BENEFIT BEING PAID

Type of Benefit	Number	Monthly Amounts Being Paid		
		Annuities	Pensions	Total
Age and Service				
Option A-1 - 5 YR. CERT.				
(Regular)	8,047	\$ 1,048,013	\$ 7,003,118	\$ 8,051,131
(With Opt. A-4)	589	79,974	1,044,503	1,124,477
(S.S. After 65)	2,501	287,933	1,457,776	1,745,709
Option A-2 - S.L.				
(Regular)	4,195	663,785	4,031,369	4,695,154
(With Opt. A-4)	301	44,735	544,708	589,443
(S.S. After 65)	789	120,395	581,781	702,176
Option A-3 - CRA				
(Regular)	904	201,173	858,551	1,059,724
(With Opt. A-4)	51	19,629	82,392	102,021
(S.S. After 65)	342	67,928	242,393	310,321
Option B-1 - 100%JS				
(Regular)	5,582	1,045,680	6,322,673	7,368,353
(With Opt. A-4)	425	62,754	764,989	827,743
(S.S. After 65)	1,251	219,563	1,138,316	1,357,879
Option B-2 - 67%JS				
(Regular)	1,779	384,854	2,204,744	2,589,598
(With Opt. A-4)	112	20,966	223,100	244,066
(S.S. After 65)	516	105,269	519,316	624,585
Option B-3 - 50%JS				
(Regular)	1,926	379,809	2,249,805	2,629,614
(With Opt. A-4)	167	23,664	316,101	339,765
(S.S. After 65)	644	117,464	612,239	729,703
Survivor Beneficiary				
(Regular)	1,972	217,218	1,448,642	1,665,860
(With Opt. A-4)	14	3,634	20,280	23,914
(S.S. After 65)	309	40,617	189,321	229,938
Age and Service Totals	32,416	\$ 5,155,056	\$ 31,856,117	\$ 37,011,173

CLOSED PLAN
RETIRED MEMBERS AND BENEFICIARIES JUNE 30, 2001
MONTHLY BENEFIT AMOUNTS BY TYPE OF BENEFIT BEING PAID
(Continued)

Type of Benefit	Number	Monthly Amounts Being Paid		
		Annuities	Pensions	Total
Non-Duty Disability				
Option A-1 - 5 YR. CERT. (Regular)	84	\$ 32	\$ 27,452	\$ 27,484
Totals	84	32	27,452	27,484
Non-Duty Death				
Spouse (Regular)	1,198	76,130	660,732	736,862
Totals	1,198	76,130	660,732	736,862
Casualty Totals	1,282	76,162	688,183	764,346
Total Allowances Being Paid	33,698	\$ 5,231,218	\$ 32,544,301	\$ 37,775,519

NEW PLAN
RETIRED MEMBERS AND BENEFICIARIES JUNE 30, 2001
MONTHLY BENEFIT AMOUNTS BY TYPE OF BENEFIT BEING PAID

Type of Benefit	Number	Monthly Amounts Being Paid		
		Annuities	Pensions	Total
Age and Service				
Option A-1 - 5 YR. CERT.				
(Regular)	21	\$ 2,893	\$ 22,643	\$ 25,536
(With Opt. A-4)	6	602	10,146	10,748
(S.S. After 65)	1	-	964	964
Option A-2 - S.L.				
(Regular)	11	652	11,611	12,263
(With Opt. A-4)	2	-	2,998	2,998
(S.S. After 65)	2	669	1,577	2,246
Option A-3 - CRA				
(Regular)	6	1,470	3,809	5,279
Option B-1 - 100%JS				
(Regular)	18	1,340	11,893	13,233
(With Opt. A-4)	5	210	10,926	11,136
(S.S. After 65)	1	-	850	850
Option B-2 - 67%JS				
(Regular)	3	-	4,826	4,826
(With Opt. A-4)	1	334	1,797	2,131
Option B-3 - 50%JS				
(Regular)	2	-	1,777	1,777
(With Opt. A-4)	1	-	1,824	1,824
Survivor Beneficiary				
(Regular)	1	-	100	100
Age and Service Totals	81	8,169	87,740	95,910
Non-Duty Death				
Spouse				
(Regular)	4	-	2,937	2,937
Casualty Totals	4		2,937	2,937
Total Allowances Being Paid	85	\$ 8,169	\$ 90,677	\$ 98,847

CLOSED PLAN
RETIRED MEMBERS AND BENEFICIARIES JUNE 30, 2001
TABULATED BY YEAR OF RETIREMENT

Year of Retirement	No.	Monthly Pensions	
		Total	Average
Before 1950	28	\$ 18,789	\$ 5,691
1950-1959	118	65,817	5,680
1960	33	14,789	448
1961	39	16,634	426
1962	49	18,267	373
1963	48	18,174	379
1964	74	29,396	397
1965	69	24,123	350
1966	92	38,261	416
1967	108	43,441	402
1968	148	66,400	449
1969	190	89,507	471
1970	270	139,673	517
1971	344	177,743	517
1972	379	210,399	555
1973	517	303,879	588
1974	499	280,570	562
1975	488	283,751	581
1976	525	305,987	583
1977	604	368,397	610
1978	644	389,769	605
1979	704	433,514	616
1980	777	469,726	605
1981	761	467,077	614
1982	732	453,126	619
1983	796	492,410	619
1984	831	524,567	631
1985	1,187	798,819	673
1986	941	647,719	688
1987	1,083	788,477	728
1988	1,177	913,528	776
1989	931	752,476	808
1990	1,421	1,291,500	909
1991	1,357	1,328,478	979
1992	1,220	1,234,663	1,012
1993	1,264	1,376,298	1,089
1994	1,398	1,555,293	1,113
1995	1,731	2,028,715	1,172
1996	1,704	2,132,769	1,252
1997	1,476	1,869,830	1,267
1998	1,850	2,464,689	1,332
1999	1,683	2,390,416	1,420
2000	1,956	2,886,963	1,476
2001	1,452	2,339,869	1,611
TOTALS	33,698	\$ 32,544,688	\$ 966

NEW PLAN
RETIRED MEMBERS AND BENEFICIARIES JUNE 30, 2001
TABULATED BY YEAR OF RETIREMENT

Year of Retirement	No.	Monthly Pensions	
		Total	Average
1996	3	\$ 2,421	\$ 807
1997	4	3,510	877
1998	12	8,426	702
1999	16	17,392	1,087
2000	33	35,994	1,091
2000	17	22,934	1,349
TOTALS	85	\$ 90,677	\$ 1,067

CLOSED PLAN
MONTHLY RETIREMENT ALLOWANCES BY ATTAINED AGE
AS OF JUNE 30, 2001

Attained Ages	Men		Women		Totals	
	No.	Monthly Allowances	No.	Monthly Allowances	No.	Monthly Allowances
UNDER 20	-	-	-	-	-	-
20 - 24	-	-	1	\$ 673	1	\$ 673
25 - 29	-	-	-	-	-	-
30 - 34	-	-	-	-	-	-
35 - 39	1	\$ 345	2	342	3	687
40 - 44	1	364	19	6,395	20	6,759
45 - 49	31	18,446	70	31,292	101	49,738
50 - 54	136	86,179	257	168,602	393	254,781
55 - 59	1,182	2,010,215	1,599	2,350,633	2,781	4,360,848
60 - 64	2,366	3,886,291	2,957	3,996,442	5,323	7,882,734
65 - 69	2,711	3,989,505	3,264	3,776,390	5,975	7,765,895
70 - 74	2,536	3,371,242	3,283	3,278,581	5,819	6,649,823
75 - 79	2,102	2,301,432	2,609	2,151,535	4,711	4,452,967
80 - 84	1,239	1,138,672	2,420	1,687,285	3,659	2,825,957
85 - 89	759	641,984	1,874	1,241,822	2,633	1,883,806
90 - 94	433	355,465	1,156	796,175	1,589	1,151,640
95 - 99	186	136,977	379	270,958	565	407,935
Over 100	79	50,396	46	30,879	125	81,275
Totals	13,762	\$ 17,987,513	19,936	\$ 19,788,003	33,698	\$ 37,775,516

NEW PLAN
MONTHLY RETIREMENT ALLOWANCES BY ATTAINED AGE
AS OF JUNE 30, 2001

Attained Ages	Men		Women		Totals	
	No.	Monthly Allowances	No.	Monthly Allowances	No.	Monthly Allowances
UNDER 20	-	-	-	-	-	-
20 - 24	-	-	-	\$ -	-	\$ -
25 - 29	-	-	-	-	-	-
30 - 34	-	-	-	-	-	-
35 - 39	-	\$ -	-	-	-	-
40 - 44	1	327	-	-	1	327
45 - 49	1	400	1	130	2	530
50 - 54	2	1,475	2	1,072	4	2,547
55 - 59	20	33,928	17	23,017	37	56,945
60 - 64	4	8,571	17	17,258	21	25,829
65 - 69	8	6,035	7	2,708	15	8,743
70 - 74	2	704	2	1,078	4	1,782
75 - 79	1	2,144	-	-	1	2,144
80 - 84	-	-	-	-	-	-
85 - 89	-	-	-	-	-	-
90 - 94	-	-	-	-	-	-
95 - 99	-	-	-	-	-	-
Over 100	-	-	-	-	-	-
Totals	39	\$ 53,583	46	\$ 45,263	85	\$ 98,846

**CLOSED PLAN INACTIVE MEMBERS
AS OF JUNE 30, 2001
BY ATTAINED AGE AND YEARS OF SERVICE**

Attained Age	Average Salary by Complete Years of Service to Valuation Date							Total
	0-4	5-9	10-14	15-19	20-24	25-29	35+	
25-29			1					1
30-34			37					37
35-39			245	16				261
40-44			284	103	12			399
45-49			353	196	137	13	1	700
50-54			476	313	239	197	26	1,251
55-59			359	279	159	119	56	972
60			43	51	34	8	10	146
61			41	21	21	9	5	97
62			50	14	10	3	6	83
63			38	13	10	9	3	73
64			48	7	2	8	6	71
65			33	8	5	5	5	56
66			13	4	4	5	4	30
67			7	2	5		4	18
68			6	3	6	1	7	23
69			3	2	2	2	5	14
70			8	5	3	1	1	18
71			5	4	2		1	12
72			4	1		2	2	9
73			4	4		1	3	12
74			1	2	3	1	1	8
75			5	6	3			14
76			3	4	2	1	1	11
77			1	3			1	5
78			5	1				6
79			14	9	6	2		31
Totals			2,087	1,071	665	387	148	4,358

**NEW PLAN INACTIVE MEMBERS
AS OF JUNE 30, 2001
BY ATTAINED AGE AND YEARS OF SERVICE**

Attained	Average Salary by Complete Years of Service to Valuation Date							
Age	0-4	5-9	10-14	15-19	20-24	25-29	35+	Total
25-29			1					1
30-34			10					10
35-39			33	3				36
40-44			23	12	2			37
45-49			17	11	10			38
50-54			32	11	19	5	3	70
55-59			15	7	3	3	3	31
60			4	1			1	6
61				1				1
62			3					3
63			2		1			3
66							1	1
Totals			140	46	35	8	8	237


**CLOSED PLAN ACTIVE MEMBERS
AS OF JUNE 30, 2001
BY ATTAINED AGE AND YEARS OF SERVICE**

Attained Age	Average Salary by Complete Years of Service to Valuation Date							Total
	0-4	5-9	10-14	15-19	20-24	25-29	35+	
20-24	94							94
25-29	455	356	2					813
30-34	246	2,326	625	1				3,198
35-39	121	813	2,210	867	1			4,012
40-44	172	691	1,256	2,542	1,046	1		5,708
45-49	168	788	1,327	1,468	3,832	2,223	4	9,810
50-54	128	605	1,393	1,768	2,028	5,461	3,032	14,415
55-59	69	230	544	921	1,107	1,595	4,537	9,003
60	6	25	52	86	129	163	552	1,013
61	6	20	24	62	82	114	432	740
62	9	16	25	49	64	82	338	583
63	4	11	22	32	42	63	242	416
64	3	6	17	18	26	31	165	266
65	6	8	6	21	18	40	116	215
66	5	2	7	8	16	16	81	135
67	9	6	3	6	8	15	62	109
68	2	2	3	6	5	7	42	67
69	4	3	3		5	7	25	47
70	2	7	2	2	3	3	29	48
71	2	1	3		2	3	16	27
72	2	2	1	2	1	1	12	21
73	1	3				4	11	19
74	1	1	2			2	6	12
75	1	1		1	1		10	14
76	2			1		1	5	9
77	1							1
78	1	2					1	4
79	1	1	1					3
Totals	1,521	5,926	7,528	7,861	8,416	9,832	9,718	50,802

**NEW PLAN ACTIVE MEMBERS AS OF JUNE 30, 2001
BY ATTAINED AGE AND YEARS OF SERVICE**

Attained Age	Average Salary by Complete Years of Service to Valuation Date							Total
	0-4	5-9	10-14	15-19	20-24	25-29	35+	
20-24	1,719							1,719
25-29	5,873	1,210	1					7,084
30-34	2,250	2,051	191	1				4,493
35-39	1,310	743	494	119				2,666
40-44	1,397	722	281	316	92			2,808
45-49	1,103	725	287	207	231	89		2,642
50-54	755	504	271	162	134	266	69	2,161
55-59	323	190	92	77	54	59	107	902
60	40	13	7	8	4	3	12	87
61	32	15	5	2	6	6	9	75
62	23	7	7	3	1	1	7	49
63	15	8	2				1	26
64	11	10	4	1				26
65	13	4	1			1		19
66	11	1	1	2				15
67	11	5					1	17
68	7	3	1	1			1	13
69	7	2						9
70	3				1	1		5
71	8	2						10
72	6		1					7
73	2	2						4
74	1	1						2
75	4							4
76	2							2
78	1							1
Totals	14,927	6,218	1,646	899	523	426	207	24,846

SECTION G



**Disclosures Required by
GASB Statements No. 25 and No. 27**

GASB STATEMENTS NO. 25 AND NO. 27
REQUIRED SUPPLEMENTARY INFORMATION

Under the Governmental Accounting Standards Board (GASB) Statements No. 25 and No. 27, certain information about the plan is required to be disclosed. The information presented in the required supplementary schedules was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation follows:

Valuation date	June 30, 2001
Actuarial Cost Method	Entry Age Actuarial Cost Method
Amortization method	Level Percent of Pay Closed
Amortization period	38 Years
Asset valuation method	Market Value
Actuarial assumptions:	
Investment rate of return	7.50%
Projected salary increases*	5.5%-10.6%
*Includes wage inflation at	5.50%
Cost-of-living adjustments	Unscheduled, periodic increases

Membership of the plan consisted of the following at June 30, 2001, the date of the latest actuarial valuation:

	<u>Closed Plan</u>	<u>New Plan</u>	<u>Totals</u>
Retired members and beneficiaries receiving benefits	33,698	85	33,783
Terminated plan members entitled to but not yet receiving benefits	4,358	237	4,595
Active plan members	50,802	24,846	75,648
Totals	88,858	25,168	114,026

GASB STATEMENTS NO. 25 AND NO. 27
REQUIRED SUPPLEMENTARY INFORMATION

Closed Plan

Actuarial Valuation Date June 30	Actuarial Value of Assets (a)	Schedule of Funding Progress			Covered Payroll (c)	UAAL as a % of Covered Payroll ((b - a) / c)
		Actuarial Liability (AAL) -- Entry-Age -- (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)		
1992*	\$2,376,039,915	\$ 7,949,159,660	\$5,573,119,745	29.9 %	\$2,416,262,885	230.7 %
1993	2,592,320,494	8,508,035,949	5,915,715,455	30.5	2,536,164,646	233.3
1994	2,808,649,929	9,087,583,424	6,278,933,495	30.9	2,614,914,517	240.1
1995	2,983,579,054	9,674,536,606	6,690,957,552	30.8	2,728,810,964	245.2
1996	3,242,032,156	10,283,174,065	7,041,141,909	31.5	2,805,823,234	250.9
1997*	3,678,102,810	10,868,423,166	7,190,320,356	33.8	2,739,435,972	262.5
1998	4,130,388,693	11,481,766,668	7,351,377,975	36.0	2,699,182,719	272.4
1999	4,730,666,420	12,172,501,450	7,441,835,030	38.9	2,755,489,026	270.1
2000	5,209,889,286	12,409,275,218	7,199,385,932	42.0	2,561,532,743	281.1
2001	5,363,497,813	12,695,787,691	7,332,289,878	42.2	2,564,451,154	285.9

* Revised benefits and/or actuarial assumptions and/or methods.

Schedule of Employer Contributions

Fiscal Year	Valuation Date June 30	Contribution Rates as Percents of Valuation Payroll	Annual Required Contribution	Percentage Contributed
1992-1993	1992	16.32%	\$416,022,498	59.0%
1993-1994	1993	16.31	436,399,180	61.0
1994-1995	1994	16.56	456,846,570	63.0
1995-1996	1995	16.74	481,927,124	65.0
1996-1997	1996	16.96	502,040,298	N/A
1997-1998	1997	16.77	484,670,600	N/A
1998-1999	1998	17.10	486,946,058	N/A
1999-2000	1999	17.02	494,778,365	N/A
2000-2001	2000	17.55	474,274,191	N/A
2001-2002	2001	17.85	496,033,881	N/A

**GASB STATEMENTS NO. 25 AND NO. 27
REQUIRED SUPPLEMENTARY INFORMATION**

New Plan

Actuarial Valuation Date June 30	Actuarial Value of Assets (a)	Schedule of Funding Progress			Covered Payroll (c)	UAAL as a % of Covered Payroll ((b - a) / c)
		Actuarial Accrued Liability (AAL) -- Entry-Age -- (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a / b)		
1996	\$ 20,587,223	\$ 47,614,251	\$ 27,027,028	43.2%	\$ 72,506,252	37.3%
1997	72,035,629	176,236,990	104,201,361	40.9	245,167,941	42.5
1998	135,923,370	298,407,427	162,484,057	45.5	395,757,887	41.1
1999	240,053,914	498,422,993	258,369,079	48.2	538,837,104	48.0
2000	368,157,499	705,790,225	337,632,726	52.2	631,071,749	53.5
2001	447,261,751	828,038,282	380,776,531	54.0	754,425,873	50.5

Schedule of Employer Contributions

Year Ended June 30	Contribution Rates as Percents of Valuation Payroll	Annual Required Contribution	Percentage Contributed
1996	9.02%	\$ 6,899,767	N/A%
1997	9.12	23,589,079	N/A
1998	9.07	37,869,479	N/A
1999	9.28	52,754,308	N/A
2000	9.54	63,515,478	N/A
2001	9.32	76,192,316	N/A

SECTION H



Actuarial Assumptions, Methods and Definitions

SUMMARY OF ASSUMPTIONS USED FOR ISTRF ACTUARIAL VALUATION

The investment return rate used in making the valuations was 7.5% per year, compounded annually (net after administrative expenses). Considering other financial assumptions, the 7.5% investment return rate translates to an assumed real rate of return of 2% over across-the-board salary increases and 2.5% over inflation.

Pay increase assumptions for individual active members are shown based on service on page H-8. Part of the assumption for each age is for a merit and/or seniority increase, 5.0% recognizes inflation and 0.5% recognizes other factors.

Total active member payroll is assumed to increase 5.5% annually, which is the portion of the individual pay increase assumptions attributable to inflation and other factors.

The number of active members is assumed to continue at the present number.

The mortality table, for post-retirement mortality and pre-retirement mortality, used in valuing allowances to be paid was the 1983 Group Annuity Mortality Male Table set back 3 years for men and 7 years for women. Related values are shown on pages H-3 and H-4. Disabled post-retirement mortality used was the 1983 Group Annuity Male Mortality Table, set forward 7 years for men and 3 years for women.

Probabilities of retirement are shown on page H-5.

The probabilities of withdrawal are shown for sample ages on page H-6.

The probabilities of disability are shown for sample ages on page H-7.

The entry age normal actuarial cost method of valuation was used in determining age and service allowance liability and normal cost, and vesting liability and normal cost.

Differences in the past between assumed experience and actual experience ("actuarial gains and losses") become part of unfunded actuarial accrued liability.

Unfunded actuarial accrued liability is amortized to produce payments (principal and interest) which are level percent-of-payroll contributions.

Employer contribution dollars were assumed to be *paid in equal installments* throughout the employer fiscal year.

Present assets (cash and investments) were valued at market.

The data about persons now covered and about present assets were furnished by the Fund's Administrative Staff. Although examined for general reasonableness, the data was not audited by the Actuary.

The actuarial valuation computations were made by or under the supervision of a Member of the American Academy of Actuaries (MAAA).

SINGLE LIFE RETIREMENT VALUES

Sample Attained Ages	Present Value of \$1 Monthly for Life		Future Life Expectancy (years)	
	Males	Females	Males	Females
45	\$146.14	\$152.18	35.62	40.38
50	139.61	147.28	30.98	35.62
55	131.61	141.02	26.55	30.98
60	121.67	133.35	22.29	26.55
65	109.41	123.85	18.23	22.29
70	95.63	112.02	14.52	18.23
75	81.23	98.44	11.31	14.52
80	66.68	84.17	8.57	11.31
Ref:	#166sb1x1	#167sb0x1		

Sample Attained Ages	Portion of Age 55 Members Still Alive	
	Males	Females
55	100.00 %	100.00 %
60	96.72	98.05
65	91.87	95.07
70	83.97	90.74
75	71.90	83.77
80	55.64	72.81
85	36.28	57.78

POST-RETIREMENT MORTALITY

Age	Regular		Disabled		Age	Regular		Disabled	
	Male	Female	Male	Female		Male	Female	Male	Female
21	0.00035	0.00032	0.00054	0.00044	61	0.00772	0.00566	0.02223	0.01387
22	0.00037	0.00033	0.00057	0.00046	62	0.00838	0.00613	0.02482	0.01559
23	0.00038	0.00033	0.00061	0.00049	63	0.00916	0.00662	0.02753	0.01758
24	0.00039	0.00034	0.00065	0.00052	64	0.01006	0.00714	0.03035	0.01980
25	0.00041	0.00035	0.00069	0.00054	65	0.01113	0.00772	0.03337	0.02223
26	0.00042	0.00037	0.00073	0.00057	66	0.01239	0.00838	0.03668	0.02482
27	0.00044	0.00038	0.00078	0.00061	67	0.01387	0.00916	0.04039	0.02753
28	0.00046	0.00039	0.00086	0.00065	68	0.01559	0.01006	0.04460	0.03035
29	0.00049	0.00041	0.00091	0.00069	69	0.01758	0.01113	0.04939	0.03337
30	0.00051	0.00042	0.00097	0.00073	70	0.01980	0.01239	0.05476	0.03668
31	0.00054	0.00044	0.00104	0.00078	71	0.02223	0.01387	0.06068	0.04039
32	0.00057	0.00046	0.00113	0.00086	72	0.02482	0.01559	0.06713	0.04460
33	0.00061	0.00049	0.00124	0.00091	73	0.02753	0.01758	0.07407	0.04939
34	0.00065	0.00052	0.00137	0.00097	74	0.03035	0.01980	0.08148	0.05476
35	0.00069	0.00054	0.00153	0.00104	75	0.03337	0.02223	0.08932	0.06068
36	0.00073	0.00057	0.00172	0.00113	76	0.03668	0.02482	0.09753	0.06713
37	0.00078	0.00061	0.00193	0.00124	77	0.04039	0.02753	0.10605	0.07407
38	0.00086	0.00065	0.00218	0.00137	78	0.04460	0.03035	0.11484	0.08148
39	0.00091	0.00069	0.00247	0.00153	79	0.04939	0.03337	0.12417	0.08932
40	0.00097	0.00073	0.00279	0.00172	80	0.05476	0.03668	0.13387	0.09753
41	0.00104	0.00078	0.00314	0.00193	81	0.06068	0.04039	0.14407	0.10605
42	0.00113	0.00086	0.00351	0.00218	82	0.06713	0.04460	0.15486	0.11484
43	0.00124	0.00091	0.00391	0.00247	83	0.07407	0.04939	0.16631	0.12417
44	0.00137	0.00097	0.00432	0.00279	84	0.08148	0.05476	0.17821	0.13387
45	0.00153	0.00104	0.00476	0.00314	85	0.08932	0.06068	0.19046	0.14407
46	0.00172	0.00113	0.00520	0.00351	86	0.09753	0.06713	0.20301	0.15486
47	0.00193	0.00124	0.00566	0.00391	87	0.10605	0.07407	0.21790	0.16631
48	0.00218	0.00137	0.00613	0.00432	88	0.11484	0.08148	0.23409	0.17821
49	0.00247	0.00153	0.00662	0.00476	89	0.12417	0.08932	0.24844	0.19046
50	0.00279	0.00172	0.00714	0.00520	90	0.13387	0.09753	0.26395	0.20301
51	0.00314	0.00193	0.00772	0.00566	91	0.14407	0.10605	0.28080	0.21790
52	0.00351	0.00218	0.00838	0.00613	92	0.15486	0.11484	0.29915	0.23409
53	0.00391	0.00247	0.00916	0.00662	93	0.16631	0.12417	0.31918	0.24844
54	0.00432	0.00279	0.01006	0.00714	94	0.17821	0.13387	0.34109	0.26395
55	0.00476	0.00314	0.01113	0.00772	95	0.19046	0.14407	0.36505	0.28080
56	0.00520	0.00351	0.01239	0.00838	96	0.20301	0.15486	0.39310	0.29915
57	0.00566	0.00391	0.01387	0.00916	97	0.21790	0.16631	0.42726	0.31918
58	0.00613	0.00432	0.01559	0.01006	98	0.23409	0.17821	0.46953	0.34109
59	0.00662	0.00476	0.01758	0.01113	99	0.24844	0.19046	0.52194	0.36505
60	0.00714	0.00520	0.01980	0.01239	100	0.26395	0.20301	0.58652	0.39310
Ref	#166sb1x1	#167sb0x1	#166sb-9x1	#167sb-10x1		#166sb1x1	#167sb0x1	#166sb-9x1	#167sb-10x1

**PROBABILITIES OF AGE AND SERVICE RETIREMENT
FOR MEMBERS ELIGIBLE TO RETIRE**

Regular Retirement			Rule of 85 Retirement			Early Retirement		
Age	Male	Female	Age	Male	Female	Age	Male	Female
						50	0.0050	0.0050
						51	0.0050	0.0050
						52	0.0050	0.0050
						53	0.0050	0.0050
						54	0.0200	0.0200
			55	0.1100	0.1100	55	0.0200	0.0200
			56	0.1000	0.1100	56	0.0200	0.0400
			57	0.1000	0.1200	57	0.0300	0.0400
			58	0.1200	0.1200	58	0.0300	0.0500
			59	0.1500	0.1600	59	0.0400	0.0500
60	0.1500	0.1500	60	0.1500	0.1500			
61	0.2000	0.1500	61	0.2000	0.1500			
62	0.3000	0.2000	62	0.3000	0.2000			
63	0.3000	0.2000	63	0.3000	0.2000			
64	0.3000	0.2000	64	0.3000	0.2000			
65	0.4000	0.3500	65	0.4000	0.3500			
66	0.4000	0.2500	66	0.4000	0.2500			
67	0.3000	0.2500	67	0.3000	0.2500			
68	0.2500	0.3000	68	0.2500	0.3000			
69	0.2000	0.3000	69	0.2000	0.3000			
70	1.0000	1.0000	70	1.0000	1.0000			
Ref	731	732		733	734		735	736

**WITHDRAWAL RATES
PRIOR TO ELIGIBILITY FOR RETIREMENT**

Years of Service	Service Based	
	Male	Female
0-1	0.2000	0.2000
1-2	0.1500	0.1600
2-3	0.1100	0.1200
3-4	0.1000	0.1100
4-5	0.0900	0.1000
Ref	120	121

Attained Age	Age Based	
	Male	Female
25	0.0830	0.0950
26	0.0830	0.0950
27	0.0810	0.0950
28	0.0720	0.0880
29	0.0630	0.0800
30	0.0540	0.0720
31	0.0460	0.0650
32	0.0380	0.0580
33	0.0360	0.0520
34	0.0320	0.0480
35	0.0290	0.0430
36	0.0260	0.0380
37	0.0230	0.0340
38	0.0210	0.0310
39	0.0190	0.0290
40	0.0180	0.0260
41	0.0170	0.0240
42	0.0160	0.0220
43	0.0160	0.0210
44	0.0160	0.0200
45	0.0150	0.0200
46	0.0150	0.0200
47	0.0150	0.0200
48	0.0150	0.0200
49	0.0150	0.0200
50	0.0150	0.0200
51	0.0140	0.0200
52	0.0140	0.0200
53	0.0140	0.0200
54	0.0140	0.0190
55	0.0130	0.0180
56	0.0130	0.0160
57	0.0120	0.0140
58	0.0120	0.0140
59	0.0120	0.0140
60	0.0120	0.0140
Ref	#202x1	#203x1

**DISABILITY RATES
PRIOR TO ELIGIBILITY FOR RETIREMENT**

Attained Age	Age Based	
	Male	Female
20	0.0006	0.0005
21	0.0006	0.0005
22	0.0006	0.0005
23	0.0006	0.0005
24	0.0006	0.0005
25	0.0006	0.0005
26	0.0006	0.0005
27	0.0006	0.0005
28	0.0006	0.0005
29	0.0005	0.0004
30	0.0005	0.0004
31	0.0005	0.0004
32	0.0004	0.0003
33	0.0004	0.0004
34	0.0005	0.0004
35	0.0005	0.0004
36	0.0005	0.0004
37	0.0005	0.0004
38	0.0006	0.0005
39	0.0008	0.0006
40	0.0009	0.0007
41	0.0010	0.0008
42	0.0011	0.0009
43	0.0012	0.0010
44	0.0013	0.0011
45	0.0014	0.0012
46	0.0016	0.0013
47	0.0017	0.0014
48	0.0022	0.0018
49	0.0027	0.0022
50	0.0032	0.0026
51	0.0036	0.0030
52	0.0041	0.0034
53	0.0045	0.0038
54	0.0049	0.0041
55	0.0053	0.0044
56	0.0056	0.0047
57	0.0060	0.0050
58	0.0060	0.0050
59	0.0060	0.0050
60	0.0060	0.0050
Ref	#135x0.6	#135x0.5

PAY INCREASE ASSUMPTIONS FOR AN INDIVIDUAL MEMBER

Years of Service	Salary Increase Assumptions for an Individual Member		
	Merit & Seniority	Base (Economic)	Increase Next Year
1	9.00%	5.50%	14.50%
2	5.50%	5.50%	11.00%
3	3.50%	5.50%	9.00%
4	3.00%	5.50%	8.50%
5	3.00%	5.50%	8.50%
6	3.00%	5.50%	8.50%
7	3.00%	5.50%	8.50%
8	3.00%	5.50%	8.50%
9	3.00%	5.50%	8.50%
10	3.00%	5.50%	8.50%
11	3.00%	5.50%	8.50%
12	2.75%	5.50%	8.25%
13	2.75%	5.50%	8.25%
14	2.75%	5.50%	8.25%
15	2.75%	5.50%	8.25%
16	2.75%	5.50%	8.25%
17	2.50%	5.50%	8.00%
18	2.25%	5.50%	7.75%
19	2.00%	5.50%	7.50%
20	1.75%	5.50%	7.25%
21	1.50%	5.50%	7.00%
22	1.00%	5.50%	6.50%
23	1.00%	5.50%	6.50%
24	1.00%	5.50%	6.50%
25	1.00%	5.50%	6.50%
26	1.50%	5.50%	7.00%
27	1.00%	5.50%	6.50%
28	1.00%	5.50%	6.50%
29	1.00%	5.50%	6.50%
30	1.00%	5.50%	6.50%
31	1.50%	5.50%	7.00%
32	1.00%	5.50%	6.50%
33	1.00%	5.50%	6.50%
34	1.00%	5.50%	6.50%
35	1.00%	5.50%	6.50%
36	2.00%	5.50%	7.50%
37	1.00%	5.50%	6.50%
38	1.00%	5.50%	6.50%
39	1.00%	5.50%	6.50%
40	1.00%	5.50%	6.50%
Ref.	419		

MISCELLANEOUS AND TECHNICAL ASSUMPTIONS

Marriage Assumption:	100% of members are assumed to be married for purposes of valuing death-in-service benefits.
Pay Increase Timing:	Middle of (fiscal) year.
Decrement Timing:	Retirement decrements are assumed to occur at the beginning of the year, other decrements are assumed to occur mid-year.
Eligibility Testing:	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
Benefit Service:	Service nearest whole year is used to determine the amount of benefit payable.
Decrement Relativity:	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
Other:	Disability and turnover decrements do not operate after member reaches retirement eligibility.
Miscellaneous Loading Factors:	The calculated normal, early retirement and vested deferred liabilities and normal costs were increased by 2% to account for the inclusion of unused sick leave in the calculation of Average Compensation.

DEFINITIONS OF TECHNICAL TERMS

ACCRUED SERVICE. Service credited under the system which was rendered before the date of the actuarial valuation.

ACTUARIAL ACCRUED LIABILITY. The difference between the actuarial present value of future benefit payments and the actuarial present value of future normal costs. Also referred to as "accrued liability" or "past service liability."

ACTUARIAL ASSUMPTIONS. Estimates of expected future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment return and pay increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (pay increases and investment return) consist of the underlying rates in an inflation-free environment plus a provision for a long-term average rate of inflation.

ACTUARIAL COST METHOD. A mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future benefit payments" between future normal costs and actuarial accrued liabilities. Sometimes referred to as the "actuarial funding method."

ACTUARIAL EQUIVALENT. One series of payments is said to be actuarially equivalent to another series of payments if the two series have the same actuarial present value.

ACTUARIAL GAIN (LOSS). The difference between actual unfunded actuarial accrued liability and anticipated unfunded actuarial accrued liability -- during the period between two valuation dates. It is a measurement of the difference between actual and expected experience.

ACTUARIAL PRESENT VALUE. The single amount now which is equal to a payment or series of payments in the future. It is determined by discounting future payments at predetermined rates of interest, and by probabilities of payment.

DEFINITIONS OF TECHNICAL TERMS (CONTINUED)

AMORTIZATION. Paying off a present value with periodic payments.

NORMAL COST. The portion of the actuarial present value of future benefits that is assigned to the current year by the actuarial cost method. Sometimes referred to as "current cost."

UNFUNDED ACTUARIAL ACCRUED LIABILITY. The difference between the actuarial accrued liabilities and the actuarial value of assets. Sometimes referred to as "unfunded past service liability," or "unfunded accrued liability" or simply as "unfunded liability."